SUPPORT FOR THE AMENDMENTS

The amendment cancels claim 12 in its entirety without prejudice, amends claims 1-11 and 13, and adds new claims 14-16, to place the claims in a better format for examination on the merits and/or to eliminate multiple dependency.

Support for the claim amendments is believed to be provided by the originally filed claims and specification.

It is believed that these claim amendments have not resulted in the introduction of new matter.

REMARKS

Claims 1-11 and 13-16 are currently pending. Claim 12 has been cancelled, claims 1-11 and 13 have been amended, and new claims 14-16 have been added.

Applicants wish to extend their appreciation to Examiner Ha for the indication on page 9 of the Official Action that claims 2-9 contain allowable subject matter.

Applicants also wish to extend their appreciation to Supervisory Examiner Gupta and Examiner Ha for the helpful and courteous discussion held on April 24, 2007, with their undersigned Representative. During the meeting, the indefiniteness and prior art rejections were discussed. The content of this discussion is believed to be reflected in the remarks set forth herein.

Applicants have discovered that peptide isomerization is decreased, thereby improving PACAP/VIP peptide stability, by utilizing Ala at amino acid position 4, Asp, Glu, or Ala at amino acid position 8, Leu or Nle at position 17, and Ala-Ala at amino acid positions 24-25 (See e.g., page 3, lines 7-12 and 25-28, page 4, lines 22-29, page 5, lines 6-11 and 17-19). This improvement in peptide stability is shown by the experimental data presented in Tables 7 and 8 of the present specification (See e.g., Examples 9 and 10 on pages 26 and 27). For example, peptides 12 (SEQ ID NO: 13), 21 (SEQ ID NO: 22), and 23 (SEQ ID NO: 24), which have Ala-Ala at amino acid positions 24-25, exhibit significantly improved peptide stability relative to peptide 4 (SEQ ID NO: 5), which has Asn-Ser at amino acid positions 24-25. Based on this discovery, Applicants have designed a number of PACAP/VIP peptides according to formula (I), which exhibit improved peptide stability, and thus higher biological activity, as compared to that of wild-type PACAP/VIP peptides.

The rejection of claims 1 and 10-13 under 35 U.S.C. § 103(a) as being obvious over Dong (U.S. Patent 6,242,563) in view of Bolin (U.S. Patent 5,141,924) is respectfully traversed.

Bolin references a wild-type VIP peptide, as described in Carlquist, having Met at amino acid position 17, and Asn-Ser at amino acid positions 24-25 (See e.g., column 1, lines 1-17). As a result, the wild-type VIP peptide, as described in Carlquist, suffers from decreased stability due to peptide isomerization, which is the very deficiency that the peptides of the present invention have been designed to overcome.

An extremely large genus of VIP peptides are described in Bolin (See e.g., column 3, lines 13-68, column 4, lines 1-3). Dong describes an extremely large genus of PACAP peptides (See e.g., column 2, lines 65-67, column 3, lines 1-67, column 4, lines 1-12). However, sufficient motivation and guidance has not been provided by Bolin and Dong to reasonably direct a skilled artisan to particularly select the claimed peptides amongst the myriad of other potential peptides encompassed within the extremely large genera of VIP and PACAP peptides described in Bolin and Dong, respectively. Moreover, Bolin and Dong fail to describe utilizing Ala at amino acid position 4, Asp, Glu, or Ala at amino acid position 8, Leu or Nle at position 17, and Ala-Ala at amino acid positions 24-25, in order to decrease peptide isomerization and thereby improve PACAP/VIP peptide stability.

Assuming *arguendo* that it would have been obvious to a skilled artisan to particularly select the claimed peptides amongst the myriad of peptides described in Bolin and Dong, such a case of obviousness is rebutted by a showing of unexpected results, as evidenced in the present specification at Tables 7 and 8, as previously discussed. But for Applicant's discovery, a skilled artisan would not have been motivated, nor had a reasonable expectation of success, to decrease PACAP/VIP peptide isomerization, and thereby improve PACAP/VIP peptide stability, by utilizing Ala at amino acid position 4, Asp, Glu, or Ala at amino acid

position 8, Leu or Nle at position 17, and Ala-Ala at amino acid positions 24-25, as presently claimed.

Withdrawal of this ground of rejection is respectfully requested.

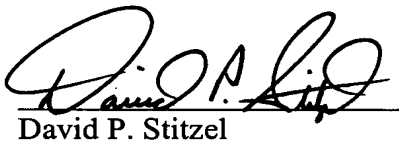
The rejection of claim 11 under 35 U.S.C. § 112, second paragraph, is obviated by amendment. Withdrawal of this ground of rejection is respectfully requested.

The objection to claim 1 is obviated by amendment. Withdrawal of this ground of objection is respectfully requested.

Applicants submit that the present application is now in condition for allowance and notification to this effect is earnestly solicited.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.
Norman F. Oblon



David P. Stitzel
Attorney of Record
Registration No. 44,360

Customer Number
22850

Tel: (703) 413-3000
Fax: (703) 413 -2220
(OSMMN 06/04)